

THE KENTUCKY GAZETTE.

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FOR THE KENTUCKY GAZETTE.

PHILANTHROPIST No. 4.

If we reject the languages what is to be done with the time, which is commonly devoted to their study? Many people suppose that a boy can learn Latin and Greek before he is old enough for any thing else. This is a grand mistake. No period of life is so important. Geography, Natural History, and Biography, may be studied with less difficulty than Latin and Greek. In these studies, the productions of the earth, the varieties of the animal and vegetable kingdoms, the different nations of the world, their manners, commerce, and government, present themselves to our view. This vast field of knowledge, from which we draw so many important truths, and from the study of which the mind expands, prejudice removes, and the intellectual powers enlarge, is adapted to the capacity of youth. The facts depend principally on memory, and this faculty in young minds is lively and strong. Arithmetic, a science of universal importance, is taught at an early period. It is perhaps as difficult as one half the sciences commonly taught at our universities. An accurate acquaintance with our own language is much less difficult than Latin and Greek, and is the surest means of gaining influence, and applause in a free republic. But our youth are not confined to those studies only. A very considerable portion of general history may be read at an early period. In fact, the whole volume of nature, and human transactions, is open for our perusal. All the knowledge which depends on memory, ought to be acquired in youth, for nature has so formed the mind, that at this period we can with most ease acquire, and treasure up knowledge. In future life, our reasoning powers are called into exertion, and we have then most occasion for this knowledge, thus early acquired.

A more important part of early education is, to form in youth, habits of virtue, firmness, and independent thought. We are surprised that this is an object of so little attention in almost every institution of learning in the United States. It has probably arisen from a too great attention to words instead of ideas. The former tends to keep the mind vague, and of course, leaves open the avenues of vice, the latter has a direct tendency to beget a love of truth, and a love of truth is the foundation of every thing noble, generous, great.

The smallest impression has a lasting influence on the tender mind. From the time we first breathe the vital air, we begin to sow the seeds of our future greatness or contempt. Every genius, which has commanded the admiration of mankind, has owed all its greatness to some impression or bent of thought, received in its earliest years. If we accustom our youth to read and comment upon the lives of such men as we wished them to imitate—if we reward every appearance of generosity and candour, and punish the contrary—if we habituate them to a love of truth and science, from their earliest years, would not their attention be better employed, than in the study of words or the found of empty names?

PHILANTHROPIST.

TO ANTHROPOPATHOS.

Be assured your address to the public, in answer to the Philanthropist, has not, as yet, secured you a seat in the temple of wisdom. But do not despair, your language expectations may yet be gratified, and a few more efforts, perhaps, may entitle you, at least to the appellation of the champion of antiquated wisdom. The great seal you have displayed in defence of your hundred forefathers, have no doubt, demonstrated you a loving son, and shewn the goodness of your heart, but unfortunately it has entirely misled your understanding, and like a blind man, you have stumbled from one subject to another; so that it is difficult to discover your meaning or intention. But, Sir, your mistaken zeal is excusable. Roused by resentment to repel the injury offered to your much insulted progenitors, by the sacrilegious pen of modern man; and the affection it is natural for you to feel for your departed kindred, particularly those who have performed some great and heroic acts of prowess, which you may think worthy of imitation. It is not surprising that resentment assumed the province of understanding, and excited you to pour forth a torrent of invectives, that

would have disgraced the lips of an idiot. It is natural, Sir, for men of weak intellects to reverence the manners and customs of antiquity—not on account of any real benefits that are to be derived from them; but merely because they were the customs of their forefathers. This Sir, I presume is the case with you; if I am to judge from your exalted logic urged in their defence. But be assured Sir, that all the eloquence and logic you are capable of displaying, will never render false, absurd dogmas, to the enlightened part of mankind, however they may impose upon the vulgar and illiterate. Nor will you effect your purpose by founding the alarm of religion being in danger, through the medium of a long, tiresome, nonfenceal and childish story. Do you really think, Sir, that the Philanthropist will effect the overthrow of religion, by demonstrating the inutility of the dead languages or by shewing the absurdity of their being taught as a liberal branch of education; or that it would gratify him (as you say) to find no person capable of comparing the tenets of the fanatics? Your assertions are bold, but unfortunately, your proofs are weak; and although your fears may be thought commendable by some; I cannot but pronounce them the inhabitants of a little and grovelling mind. Do you suppose that there is even a remote probability that we shall ever have a more perfect translation of the scriptures than what we have at present? To admit this is to pronounce that we are better acquainted with the dead languages, than they were a century past when an acquaintance with those languages was much more cultivated than at present, which is absurd. Do not prostitute religion for the infamous purpose of screening your ignorance and weakness; nor make use of that old hobby horse where it is not concerned, when you find yourself deficient in argument. Religion is not in danger—not would it be was there not a Latin or Greek pedagogue in the university. We do not hold it by so ticklish a tenure, as to be shaken by every blast of wind; nor are we to be frightened from an enquiry after truth, by the mere puff of a new paper dabbler. The public, Sir, would no doubt have been much gratified and indebted to you, should you had fulfilled your promise of overturning the doctrine of that "enemy to polite literature," as you are pleased to call the Philanthropist. You set out with the strongest professions of accomplishing that end, and raised to the highest pinnacle the expectations of your readers. But what is our surprise when we find nothing to gratify those expectations, but mere scurrilous tales, irrelevant to the subject, and one which we did even have to disfigure a schoolboy. Like the mountain in labor, you groined aloud and pretended to be pregnant with something worthy the attention of your fellow citizens, but when you were delivered behold it was nothing but a mere mouse!!!

PHILOPHANTHROPIST.

[PUBLISHED BY AUTHORITY.]

SEVENTH CONGRESS OF THE UNITED STATES, AT THE FIRST SESSION.

Begun and held at the City of Washington, in the Territory of Columbia, on Monday, the Seventh of December, one thousand eight hundred and one.

AN ACT

Making a partial appropriation for the support of government during the year one thousand eight hundred and two.

BE it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That the sum of one hundred thousand dollars to be paid out of any monies in the treasury not otherwise appropriated, shall be, and the same hereby is appropriated towards defraying the expensures of the civil list, including the contingent expensures of the several departments during the year one thousand eight hundred and two.

NATHL. MACON,

Speaker of the House of Representatives.

A. BURR,

Vice-President of the United States, and President of the Senate.

APPROVED, April 2, 1802.

TH. JEFFERSON,

President of the United States.

AN ACT

Making an appropriation for defraying the expensures which may arise from carrying into effect the convention made between the United States and the French Republic.

BE it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That for the payment of such demands as may be justly due for French vessels and property captured, and which must be restored or paid for, pursuant to the convention between the United States

and the French Republic, there be appropriated a sum not exceeding three hundred and eighteen thousand dollars to be paid under the direction of the President of the United States, out of any public money in the treasury not otherwise appropriated.

NATHL. MACON,

Speaker of the House of Representatives.

A. BURR,

Vice-President of the United States, and President of the Senate.

APPROVED, April 3, 1802.

TH. JEFFERSON,

President of the United States.

AN ACT

Making appropriation for defraying the expence of a negotiation with the British government, to ascertain the boundary line between the United States and Upper Canada.

BE it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That a sum not exceeding ten thousand dollars be, and the same is hereby appropriated, payable out of any money in the treasury not otherwise appropriated to defray the expence which shall be incurred in negotiating with the government of Great Britain, for ascertaining and establishing the boundary line between the United States and the British province of Upper Canada; when the President of the United States shall deem it expedient to commence such negotiation.

NATHL. MACON,

Speaker of the House of Representatives.

A. BURR,

Vice-President of the United States, and President of the Senate.

APPROVED, April 3, 1802.

TH. JEFFERSON,

President of the United States.

AN ACT

For the relief of ISAAC ZANE.

BE it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the President of the United States be, and he is hereby authorized and empowered to issue letters patent, in the name, and under the seal of the United States, thereby granting and conveying to Isaac Zane, his heirs and assigns, in fee simple, three sections of land, of one square mile each, within the North-Western Territory, of any lands not heretofore granted or reserved, and to which the Indian title has been extinguished; in trust, nevertheless, in respect to two of the said sections, which shall be left mentioned and described in the said letters patent, to, and for the use and benefit of the children of the said Isaac Zane, who shall be living at the time of his death, and of the heirs of any child or children, deceased, and their heirs, respectively, to hold as tenants in common.

Sec. 2. And be it further enacted, That the said Isaac Zane, or his attorney in fact, shall, and they are hereby authorized and empowered to locate the said three sections in one or more tracts, not to exceed three locations of six hundred and forty acres each: Provided, the said land is not granted, appropriated or reserved by any act or resolution of the United States, or of Virginia, at the time of location.

Sec. 3. And be it further enacted, That the Surveyor-General of the United States, or one of his deputies, shall, without delay, reasonable notice thereof being first given, survey and lay off the same as the law directs: Provided, the same has not at such time, been surveyed.

NATHL. MACON,

Speaker of the House of Representatives.

A. BURR,

Vice-President of the United States, and President of the Senate.

APPROVED, April 3, 1802.

TH. JEFFERSON,

President of the United States.

AN ACT

To repeal the Internal Taxes.

BE it enacted by the Senate and House of Representatives of the United States of America, in Congress assembled, That from and after the thirtieth day of June next, the internal duties on stills and domestic distilled spirits, on refined sugars, licenses to retailers, sales at auction, carriages for the conveyance of persons, and stamped vellum parchment and paper, shall be discontinued, and all acts and parts of acts relative thereto shall, from and after the said thirtieth day of June next, be repealed: Provided, That for the recovery of receipts for such duties, as shall have accrued, and on the day thereof remain outstanding, and for the payment of duties or allowances on the exportation of any of the said spirits or sugars legally entitled thereto, and for the recovery and distribution of

fines, penalties, and forfeitures, and the redemption thereof, which shall have been incurred before and on the said day, the provisions of the aforesaid acts shall remain in full force and virtue.

Sec. 2. And be it further enacted, That the office of Superintendent or Stamp Collector shall be discontinued from and after the thirtieth day of April, 1802; after which day the Commissioner of the revenue shall perform all the duties by law enjoined on the said Superintendent of Stamps, which may be required in pursuance of this act; that the office of collectors of the internal duties shall continue in each collection district, respectively, until the collection of the duties above mentioned shall have been completed in such district, and no longer, unless sooner discontinued by the President of the United States who shall be and hereby is empowered whenever the collection of the said duties shall have been for so far completed in any district as to render, in his opinion, that measure expedient, to discontinue any of the said collectors and to unite into one collection district any two or more collection districts lying and being in the same state; that the office of Insuffor shall continue in each state or district, respectively, until the collection of the duties above mentioned together with the collection of the direct tax shall have been completed in such state or district, and no longer, unless sooner discontinued by the President of the United States, who shall be and hereby is empowered, whenever the collection of the said duties and tax shall have been completed in any state or district as to render, that measure expedient, to discontinue any of the said officers, in which case the collectors thereafter employed in the collection of the said duties and tax in such state or district shall be appointed and removable by the President alone, and shall be immediately accountable to the officers of the treasury department, under such regulations as may be established by the secretary of the treasury: that for the promoting of the collection of any of the above mentioned duties or tax which may be outstanding after the said thirtieth day of June next, the President of the United States shall be, and he hereby is empowered at any time thereafter, to make such allowance as he may think proper in addition to that now allowed by law to any of the collectors of the said duties and tax, and the same from time to time to vary: Provided, That such additional allowance shall in no instance exceed in the aggregate five per cent of the gross amount of the duties and tax outstanding on that day; and the office of Commissioner of the revenue shall cease and be discontinued whenever the collection of the duties and tax above mentioned shall be completed unless sooner discontinued by the President of the United States, who shall be and hereby is empowered whenever the collection of the said duties and tax shall have been so far completed as, in his opinion, to render that measure expedient, to discontinue the said office, in which case the immediate superintendence of the collection of such parts of the said duties and taxes as may then remain outstanding, shall be placed in such officer of the treasury department as the secretary of the time being may designate: Provided, however, That all bonds, notes or other instruments, which have been charged with the payment of a duty, and which shall, at any time prior to the thirtieth day of June, have been written or printed upon vellum, parchment or paper not stamped or marked according to law, or upon vellum, parchment or paper stamped or marked at a lower rate of duty than is by law, required for such bond, note or other instrument, may be presented to any collector of the customs within the state; and where there is no such collector, to the marshal of the district, whose duty it shall be, upon the payment of the duty with which such instrument was chargeable, together with the additional sum of ten dollars, for which duty and additional sum the said collector or marshal of the United States, to endorse upon some part of such instrument, his receipt for the same; and thereupon, the said bond, note or other instrument shall be, to all intents and purposes, as valid, and available to the person holding the same, as if it had been or were stamped, counterstamped, or marked as by law required, anything in any act to the contrary, notwithstanding.

Sec. 3. And be it further enacted, That owners of stills whose licenses to distil shall have expired on the thirtieth day of June next, shall, at their option, pay either a tax of one dollar which would have accrued on their stills on account of such licenses, or the duty which would have accrued on said stills, on the day thereof, if they had taken licenses ending on the first day of January next, or the duty which would have accrued on the first day of January next, 1796, shall be also a deduction from the duties incurred on the same, proportionate to the time thus remaining unexpired on such licenses: that the several laws, which may have agreed to pay the annual composition of one per cent, on their dividends, in lieu of the

stamped duty on the notes issued by them, shall pay only at the rate of one per cent. per annum, on such dividends to the thirty-third day of June next; that retailers of wines and spirits, who may take licenses after the passing of this act, shall pay for such licenses only in proportion to the time which they may interfere in the obtaining of such licenses and the thirty-third day of June next; and that the owners of carriages for the conveyance of persons, who may enter the same after the passing of this act, and before the thirty-third day of June next, shall pay the duty for the same only to the said thirty-third day of June.

Sec. 4. *And be it further enacted*, That the supervisor of the North West district shall in addition to the same commissions on the product of all the internal duties collected in his district, as heretofore has been allowed to the supervisor of Ohio, be allowed an annual salary of five hundred dollars; and at the rate of three hundred dollars per annum, for clerks hire.

Sec. 5. *And be it further enacted*, That the following extra allowances for clerk hire shall be made for one year, to the supervisors of the following districts, as a full compensation for the additional duties arising from the settlement of accounts of certain inspectors of the internal revenue, whose offices have been suppressed by the President of the United States; that is to say:—To each of the supervisors of Massachusetts, Pennsylvania, Maryland, North-Carolina and South-Carolina, the sum of 800 dollars; and to the supervisor of Virginia, the sum of 500 dollars.

Sec. 6. *And be it further enacted*, That for much of any act, as directs an annual census of stills to be made, be, and the same hereby is repealed.

Sec. 7. *And be it further enacted*, That the certificates accompanying foreign distilled spirits, wines and teas, which are now furnished by the supervisors to the inspectors of the ports shall, from and after the aforesaid thirty-third day of June be furnished by such collectors of the customs, as may be designated by the secretary of the Treasury. And it shall be the duty of the inspectors to account with such collectors for the application of such certificates, in like manner, and under the same regulations, as heretofore they have accounted with the supervisors.

Sec. 8. *And be it further enacted*, That for preparing and issuing the certificates, the collectors performing that duty, shall be entitled to, and receive the same compensation, as heretofore has been allowed to the supervisors, respectively.

Sec. 9. *And be it further enacted*, That all persons who shall on or after the thirty-third day of June next, have any blank vellum parchment or paper, which has been stamped by the superintendent of the stamps, and counterstamped by the commissioner of the revenue, and on which a duty has been paid to the use of government, shall be entitled to receive from such collector or collectors of the customs, or other revenue officer in the respective states or districts, as may be designated for that purpose by the secretary of the treasury, the value of the said stamps, after deducting, in all cases, seven and an half per cent. and the said officers are hereby authorized to pay the same. Provided, That the said blank vellum parchment or paper, be presented within four months after the 30th day of June next.

NATHL. MACON,
Speaker of the House of Representatives.
A. BURR,
Vice-President of the United States,
and President of the Senate.
APPROVED, April 6, 1802.
TH: JEFFERSON,
President of the United States.

At a meeting of the Transylvania Philosophical Society, held at the University, on the 24th April, 1802—on motion
—Ordered, that the dissertation of A. Batty esq. read at the February meeting, be published.

JOHN TILFORD, Sec'y.

A THEORY

Of Congelation, Evaporation, the formation of Clouds, and the production of Rain and Snow.

(CONCLUDED FROM OUR LAST.)

I shall now proceed to the principle subject of the first part of this thesis; in the progress of which, I shall make incidentally, as circumstances may require, such further observations on caloric as may appear necessary.

Evaporation may be defined to be a transformation of water, or other fluid substance from a liquid to a vaporous or aeriform state. All substances in nature are found to be acted upon by different, but invariable and permanent laws, of whose existence we are conscious, from their effects being daily exposed to our senses; but concerning the nature of whose operations we are almost totally ignorant. Of these laws, those which come most frequently within the sphere of our observation, are the laws of gravitation, and cohesive attraction.

Gravitation is that power, whatever may be its cause, which gives to all bodies a tendency to approach each other with a force in proportion to their absolute quantity of matter or solid contents.

Cohesive attraction is that power, which operates only on bodies very nearly in contact; and is the cause by which the atoms, or indivisible particles of bodies are united

into feeble masses. This power does not, like that of gravitation, operate on bodies in proportion to their solid contents, but is more or less strong in almost every different fluidance. It differs also from gravitation materially in another respect; that is its capability of being destroyed by the operation of a third fluidance, viz. caloric. The means by which caloric destroys that cohesive attraction, which exists between the particles of all solid bodies, are not well understood; but that it does so is a fact which cannot be denied. Mr. Lavoisier supposes that the particles of caloric have a stronger mutual attraction than those of any other substance; and that the particles of the substance, into which the caloric penetrates, are torn asunder in consequence of this superior attraction, which forces them between the particles of other bodies, that they may be able to reunite with each other. This operation is something like that which takes place when a sponge is immersed in water; for by a certain combination of different attractive powers the water is able to separate the particles of the sponge, and to infiltrate itself into all its interstices. The same operation takes place when almost any porous substance is immersed in water. If, for instance, wood is immersed in water, the water not only fills all the pores, but actually tears the particles of the wood asunder, not sufficiently indeed to destroy their cohesive attraction, but so much so as to increase considerably the bulk of the wood. I think it cannot be doubted but that caloric acts upon all fluidances, capable of fluidity, as water, in the above instance, acts upon the wood; for these fluidances are invariably found to increase in volume in proportion to the quantity of caloric introduced into them.* When this property of caloric is admitted, it is easy to account for the cause of the three different states viz. solidity, liquidity, and aeriform elasticity, which Mr. Lavoisier supposes almost all fluidances, under different circumstances, may assume. Thus all substances naturally exist in a solid state; but if a quantity of caloric, sufficient to destroy the cohesive attraction, which exists between their particles, is introduced into them, they immediately assume the liquid state. The power of gravity, however still exists, and prevents the particles of the fluid from flying off into the atmosphere. But if more caloric is added, the power of gravity, as well as the pressure of the atmosphere, may be finally overcome; when the substance will assume the elastic aeriform state. Thus mercury in the temperature of our climate is always liquid; but if exposed to a temperature of about 45 deg. below 0 of Fahrenheit, it assumes the solid state; and on the contrary, when a very slight heat, if exposed to a high degree of heat, would easily assume the aeriform elastic state. The attraction of cohesion between the particles of water is much stronger, and can only be overcome by a quantity of caloric equal to about 32 deg. of Fahrenheit; and on the contrary, being not near so fluid as mercury, is able to overcome the pressure of the atmosphere, as well as the power of gravity, and to assume a permanently elastic aeriform state at a temperature of about 212 deg.

The transformation of all substances into the gaseous state by means of evaporation depends upon the same principles, I shall confine my observations principally to one; and shall make choice of water, because the evaporation of this substance comes more within the sphere of our observation than any other; and because it is principally this, which affords the means of rain and snow, which will hereafter be subjects of this thesis.

I have already observed, that a temperature of about 32 deg. Fahrenheit is the point at which a sufficient change water from its solid to its liquid state; but as its capacity for containing caloric, as I have already shown is considerably greater in its liquid than in its solid

NOTES.

* Instead of accounting the separation of the particles of hard fluidances by the agency of caloric on the hypothesis of Mr. Lavoisier, I think it may be done more satisfactorily upon the same principles on which the separation of the particles of wood by the agency of water is accounted for; viz. a stronger affinity between the particles of the caloric and those of the substance which it penetrates than between the particles of the substance themselves. There only appears to be this difference, that the affinity of caloric for other fluidances is much stronger than that of water; and is not, (as far as has yet been discovered) like water, capable of being its superior affinity destroyed by the introduction of a third fluidance by saturating the substance which it penetrates.

It is not difficult to conceive of the means by which ice is rendered liquid by the agency of caloric, when it is considered that the cohesive attraction existing between its particles is the sole cause of its solidity; and that this cohesive attraction is capable of being destroyed by the introduction of this fluid. Were there no such power as cohesive attraction, the particles of the ice would be united by no other bond of union than that with which grains of sand are kept together, viz. the power of gravitation. Now if a fluid, which has a stronger affinity for the grains of sand than the grains of sand have for each other, should be poured among a portion of it, the grains of sand would, by reason of this stronger affinity of the fluid, be distributed throughout the whole of its equal portions, and all of them would be carried to some distance from each other. Hence it is just to suppose that this fluid were poured among the sand and to separate its parts so much as to prevent them from coming in contact with each other, the fluid might be called a fluid; but it may be capable of being moved through each other with the utmost facility. In a word the process of dissolving ice, or rendering it liquid, is just like that which takes place in the dissolution of a solid in water, with this difference, that salt and sugar, in their state of dissolution, are invisible, whereas the particles of the water are still visible, but in a liquid, instead of a solid state.

Rate, it necessarily follows, that, as soon as the ice begins to dissolve, a quantity of caloric will be wanting to supply the water, formed by the melting of the ice, to the full extent of its increased capacity. If the temperature of the atmosphere were such as to raise the mercury in the thermometer two or three degrees above the freezing point, it would be sufficient, on the supposition that the capacities of ice and water for containing caloric were equal, to dissolve a considerable mass of ice in a very short time. But as a great portion of the heat, which is brought in contact with the ice, by the surrounding atmosphere, is required for the purpose of supplying the water, as it is gradually formed by the dissolution of the ice, to the utmost extent of its increased capacity, there is but little left to carry on the process; it must therefore proceed very slowly. Thus the two operations counteract the effects of each other, and render the progress of dissolution very gradual.

Nor is the effect remarkably different when the temperature of the surrounding atmosphere is twenty or thirty, or even 60 or 70 degrees above the freezing point; for as this high temperature is calculated to produce a rapid thaw, so it also affords the means of affording, in greater abundance, the heat which from the surrounding atmosphere comes in contact with the ice; and that portion of heat will only exert itself in carrying on the process of dissolving the ice, which remains after supplying the water, as it is gradually formed, to the utmost extent of its increased capacity for containing caloric. Hence it is that a piece of ice, exposed to a very high degree of temperature, requires a considerable space of time to render it liquid.

Just the contrary effect will be produced by the congelation or transformation of water into ice. For during this process every particle of water that congeals must give out as much heat as the capacity of water for containing caloric exceeds that of ice. This heat is communicated to the water not yet congealed, and keeps the whole mass, as well as waters of ice, at 32 deg. until the whole becomes solid; when, as the supply of heat becomes exhausted by congelation, the ice will very soon sink the thermometer to the same degree shown by one exposed to the atmosphere. Altho' the cold should be sufficient to sink the thermometer in the thermometer exposed to the atmosphere 20 deg. below 0, still that in the ice will maintain its position about the freezing point, until the whole of the water is congealed, when it will sink rapidly to the same degree. Nor will this high degree of cold render the progress of congelation as rapid as we would be apt to suppose; for the very means necessary to increase the rapidity of congelation would also afford the means of checking its progress: heat being always produced in proportion to the rapidity with which the particles of the water are congealed.

These regular and beautiful phenomena attending the alternate changes of water into ice, and ice into water (and which, I shall presently show, attend also the alternate changes of water into vapour, and vapour into water) are not less worthy of being admired on account of their utility than for their beauty and regularity. A moment's reflection on the dreadful consequences which would inevitably result from these changes in the state of water did they not, in the one case, produce heat, and in the other, afford it, will give us another strong proof, among the many that come daily within the sphere of our observation, of the wisdom, beauty, and regularity of all the operations of nature. It is evident that if water did not give out its heat during the process of congelation, any whole mass, however large it might be, would become solid almost the very instant the thermometer has sunk to the freezing point. But as its liquid state was owing altogether to the cohesive attraction between its particles having been destroyed by the introduction of caloric, it follows, that as soon as so much of this caloric is extracted as to permit the particles of the water to come again so nearly in contact as to restore their cohesive attraction, the whole mass must instantly assume the solid state, and as the temperature even of our moderate climate frequently sinks the mercury to the freezing point, it necessarily follows, that every winter all our rivers would be converted into solid bodies of ice. It would very frequently happen that not a drop of water, in its liquid state, could be procured except from our springs and wells.

On the contrary if, during a thaw, no heat were absorbed, the process would be as rapid as had been that of congelation. For as soon as a quantity of caloric, equal to 32 deg. of Fahrenheit's thermometer, has penetrated the ice, the cohesive attraction of its particles would be destroyed, when it must immediately assume the liquid state. The consequences of which would be still more dreadful than that of having all our rivers converted into solid masses of ice. As water does not congeal until the mercury in the thermometer sinks to 32 deg. the water of all our springs, being preserved from the cold by the earth, would continue to run during the winter as usual, but would gradually cool, until it arrived at the freezing point, when it would instantly congeal. Thus the whole mass of water, which issues from our fountains, and which, at present, supplies all our rivers, would, during the winter season, be converted into immense mountains of ice, which, on the arrival of the first moderate weather, would very soon be converted into a liquid state, and would thus carry havoc and destruction over all our fertile plains. This, too, might happen several

times in the course of one winter. More northerly climates would experience consequences still more destructive; for this rapid dissolution of the ice and snow, accumulated during five or six months, could occasion nothing less than a general deluge.

I have before observed, that where a quantity of caloric, equal to about 32 deg. of Fahrenheit, has been communicated to ice, it will gradually assume the liquid state; and I have also shown, that water will have its increased capacity for containing caloric supplied as fast as it is produced. It follows, therefore, that the very instant a mass of ice is completely dissolved, the caloric, which the superior temperature of the surrounding atmosphere is continually supplying, can no longer be dissipated as before, the water, formed by the dissolution of the ice, having already received its full supply. The only way, then, in which this continual supply of caloric can be employed, is in producing a still farther separation of the particles of the water, which have already lost their cohesive attraction. But as the pressure on the inferior parts of the water is much greater than on its superior, a greater separation is produced between the particles of its surface, than those of any other part; especially when the supply of caloric, as is usually the case, is from that quarter. Hence evaporation immediately commences from the surface of the water; and it is to this quarter, for the reasons stated above, that the greatest portion of caloric collects for the purpose of carrying on the process.

It is obvious that water cannot rise in the form of vapour, until its particles have been divided and subdivided to such a degree, that they have become specifically lighter than the atmosphere. But it may be said, that if one substance is specifically heavier than another, although the heavier substance should be divided into the most minute atoms, still these atoms, no matter how small they may be, would be heavier than atoms of the same size of the lighter substance. I confess this reasoning appears to be just; but in Natural Philosophy we should never trust to abstract reasoning, where experiment comes within our reach. For-although the above reasoning would certainly be correct, when applied to the atoms of the two substances weighed in scales, yet as we are not perfectly acquainted with the nature of fluids, and the manner of their acting upon other bodies, we could not thence infer with certainty, that the result would, in both cases, be the same.

If the above reasoning were correct, it would necessarily follow, that a piece of marble in its solid state, would meet with as much resistance in passing through a fluid medium, as it would when powdered; for the pressure of gravity is, in both cases, the same, and each of them will pass with equal rapidity through a vacuum. But so far from this being the case, I found, by diluting a quantity of very finely powdered marble in water, that the water would not become completely transparent in four and twenty hours; but that, after this length of time, it still retained, in some measure, the milky colour, which the powdered marble had given to it. And I have no doubt, but that some of the finer particles remained permanently suspended, although they were invisible to the naked eye; for we know, that by distillation, particles of the limestone can be procured from the most transparent water, as is evinced by the quantities we always find collected in tea-kettles, in which limestone water is usually boiled. Limestone-water too, affords a strong proof of the capability of this fluid to keep permanently suspended, very fine particles of stone; for the milky colour, which this water always preserves, can be only owing to an immense number of very fine particles of the stone being kept permanently suspended.

The resistance of the air, to bodies set in motion by the power of gravity, is also very great; for if some of the powdered marble is dulled in the open air, the finer particles will remain suspended a considerable time.

It has been found, that the resistance of fluid mediums, to bodies set in motion by the power of gravity, is in proportion to the extent of their surfaces, and not, like the power of gravity, in proportion to their solid contents. Hence it follows, that every division and subdivision that takes place in any body, the greater will be the resistance with which it will meet, in passing through the atmosphere. Thus a cubic inch of marble exposes a surface of six square inches; if it be divided, it exposes a surface of eight square inches; & if each of the halves be again divided in the same direction, the four parts will expose a surface of twelve square inches; & as often as the parts are divided & subdivided, so often will the resistance to the progress of surface which they will expose. It is evident that as soon as a quantity of surface, by means of these divisions and subdivisions, is exposed sufficient to counteract the power of gravity, the body having its surface thus extended, must remain suspended, and at rest, (unless moved by currents of wind) in whatever part of the atmosphere it may be placed. But should a further division take place, its surface would be more than sufficient to counteract the power of gravity, it must therefore, in compliance with the general law of fluids, continue to rise until it comes to that part of the atmosphere, whose density is just in equilibrium with the surface of the particle, and the power of gravity; where it would again rest in a suspended state. Thus, as soon as ice is completely dissolved, the caloric, supplied by the surrounding atmosphere, instead of employing itself as heretofore in

SACRED TO THE MUSES.

EPICURAM.

AS THOU wast one day in deep chat with his friend,
He gravely advis'd him his morals to mend;
That "his morals were bad, he had heard it from
many."

ANECDOTE.

Lord Chancellor Harrow, during a cause,
in which the boundaries of a piece of land
were to be ascertained, the counsel of the
5th party stated:— "We live on this side, my
lord," that of the other party, "and we live
on the other side." The Chancellor, rising up, said,
"you live on both sides, whom will you have
me believe?"

NEW & CHEAP STORE.

Lewis Sanders, & Co.

HAVE received from Philadelphia,
and are now opening a choice and
general assortment of

MERCHANDIZE,

Consisting of
DRY GOODS, viz.

Superfine Cloths,
Velvets and Fancy Goods,
India Mulling, which they would sell low
for cash, by the original package.
Figured, plain & glazed cambric do.
Tambored & plain Jaconnet do.
Ditto Book ditto,
A choice assortment of Chintzes & Calicoes
of the newest and most fashionable
patterns;
India silk, Romals & Bandanas,
Irish Linen, fold very low by the piece;
Laceings, Satins & Sarfanets,
Marcellite Waddington.
A large assortment of Umbrellas, &c.
A very general assortment of Hardware,
German, Crawley & English Blister steel,
Vices,
A general assortment of Saddlery &c.
China, Glass, Queens' & Tin ware,
Groceries,
Coffee, Teas,
Spices, Dye Stuffs,
Best Red Bark for sale by the pound or
larger quantity;
Port Wine,
Bengali, Spanish and French Indigo,
Annatto,
Cotton and Wool Cards, &c. &c.

Having laid in the above assortment on
such terms as will enable them to give greater
bargains than has heretofore been given in
this place, they flatter themselves that the
purchaser will find it in his interest to give them
a call. No credit on any terms what-
ever.

Lexington, 2d April, 1802.

ALEXANDER PARKER & Co.

Have just imported from Philadelphia,
and opened at their STORE, in Lex-
ington, on Main Street, opposite the
Court house,
A Very Large, and Well Assorted Cargo

MERCHANDIZE,

Consisting of
DRY GOODS,
GROCERIES,
HARD WARE,
QUEENS' GLASS, CHINA,
WARES, &c.

Which have been laid in on lower
terms than usual, and which will be sold
accordingly, for Cash, Hemp, and Coun-
try made Sugar. To avoid the great
trouble and expence attending the col-
lection of debts, no accounts will be open-
ed.

Lexington, April 1, 1802.

LAST NOTICE.

ALL those indebted to the subscriber,
by bond, note, or book account—
likewise those indebted to the estates of
JAMES & WILLIAM PARKER deceased,
are requested to make payment of the
respective sums due, before the first of
June next. Those who fail to comply
with this notice, may depend on suits be-
ing commenced against them without dis-
crimination.

ALEXANDER PARKER.

Lexington, April 1, 1802.

FOR SALE,

THE Property lately occupied in this town, by
Mr. Arthur Thompson, and at present by
Mr. Dellius, consisting of Two New Two Story

FRAME HOUSES,

Nearly finished, large and convenient Cellars, a
large frame Stable and Kitchen, good Smoke House,
and Three Lots belonging to the above premises.
Also two hundred acres of GOOD QUALITY
LAND, lying on the head of Salt River, about five
miles from this town; the title clear of every
kind of dispute; the Land is well watered, but
entirely unimproved. A liberal credit will be given
for the payment, and the whole amount will be re-
ceived in Produce. The terms will be made known
by application to Messrs. Cochran & Thurlby, mer-
chants, of Philadelphia, or the subscriber, in Dan-
ville.

J. BIRNEY.

Danville, 9th February, 1804.

LAST NOTICE.

In the case of JOHN NANCARROW

[A BANKRUPT.]

WHEREAS a commission of Bank-
ruptcy, founded upon the act of Congress
of the United States, passed on the fourth
day of April 1800, entitled, "An act to
establish a uniform system of bankruptcy
throughout the United States," has been
awarded and issued against John Nancarrow,
in the town of Lexington and district
of Kentucky, merchant; and he has been
declared a bankrupt. Wherefore the said
John Nancarrow is hereby required to
surrender himself, to the commissioners,
in the said commission named, or the ma-
jor part of them on the 10th and 24th
days of April, and on the 8th day of May
next, at 3 o'clock in the afternoon of each
day, at the office of the District court in
the town of Lexington, and make a full
and true inventory of his estate and effects,
when and where his creditors are to
come prepared to prove their debts;
and at the second sitting to choose affi-
dants, and at the last sitting the said Bank-
rupt is required to finish his examination:
All persons indebted to said Bankrupt, or
who have any of his effects, are not to
pay or deliver the same but to whom the
commissioners shall appoint.

Will, Morton,
John Bradford, } Compt.
John Jordan, jun. }
Lexington, March 27th 1802.

NOTICE.

PUBLIC ENTERTAINMENT

Will be kept at the

SIGN OF THE BUFFALO,

On Main Street, in Lexington, opposite the Public
Square.

DANVILLE DISTRICT, &c.

January Term, 1802.

Cuthbert Harrison, Complainant.
against
James Barbour, Thomas } Defendants.
Holt, and Philip Barbour, }
IN CHANCERY.

THE defendant Holt, not having en-
tered his appearance herein, agreeably to law
and the rules of this court and it appearing to the
satisfaction of the court, that the said defendant is
not an inhabitant of this state; on the motion of the
complainant, by his counsel, it is ordered that he do
appear, on the third day of the next May term
and answer the complainant's bill; and that a copy
of this order be forthwith inserted in the Kentucky
Gazette, for two months successively; another copy
posted up at the court house door, and a third copy
published at the Danville meeting-house door from
Sunday immediately after divine service.

A copy. Telle,
WILLIS GREEN, C. D. D. C.

WAGNON'S

R. BRADLEY

RESPECTFULLY announces that
he succeeds Major WAGNON, in the
commodious Brick House and Stables,
which he lately occupied in this place,
with a revision of assistants and servants,
arranged to respective departments;
which together with that peculiar respect
shown himself while with Major Wag-
non, emboldens him to anticipate a pa-
tronage from GUESTS, ONLY,
as durable as his solicitude to please.

Lexington, 15th Feb. 1802.

THE President and Directors of the
Kentucky insurance company, think it
their duty to inform their fellow citizens
and the public in general, that they are
now organized, and ready to receive pro-
posals to insure vessels or boats of every
description, on their voyages up or down
the Western waters, or at sea: Application
may be made at their office in Lex-
ington, accompanied with declaration
of the shipper and certificate containing
the name, burthen, dimensions and the
goodness of the said vessel or boat, their
being well found for the intended voyage;
the bill of lading or manifest of the cargo;
the port from which they sail and place
of destination. Further information may
be had at their office.

Lexington, 1st February, 1802.

JAMES MACCOUN

Has just received from Philadelphia, a large and
well chosen assortment of

MERCHANDIZE,

Now opening at his Store on Main Street,
nearly opposite the Market house, which will
be sold at the LOWEST PRICES for Cash.

Nail Manufactory.

A constant supply of Cold and Hammered
NAILS, of the best quality.

Lexington, January 18, 1802.

WANTED,

A QUANTITY OF

MERCHANTABLE WHISKY,

(If delivered at Frankfort would be preferred)

Apply to
MACCOUN & POZIER.

Lexington, 26th, Feb. 1802.

For the information of those who wish to
make INSURANCE.

APPLICATION for insurance must
be accompanied with a certificate,
specifying the length and width of the
vessel or boat, the cable, stern-falls, num-
ber of masts, pump and canoe or skiff, the
number of hands, &c. which ought to be
given by persons who are judges, and
who are, disinterested reputable men.
—A bill of lading signed by the cap-
tain, or a manifest signed by the inspec-
tor, which shall specify the whole of the
cargo on board, or to be put on board—
it must also state where the boat or vessel
lies—where the will take in her cargo—
when she will take her departure; or if
she has failed, the time when, and the
port to which she is bound; and if a
ny information has been received from
her since she failed, it must be communi-
cated. The insurance does not com-
mence until the vessel is under way, on
her intended voyage and the premium
paid.

In all cases of loss, if practicable, a sur-
vey must be made by disinterested men,
who are to state in writing, what in their
opinion is necessary to be done, for the
interest of the parties concerned; as also
a protest to be entered by the captain on
oath, in which the hands must join, stating
particularly the loss, where and how it
happened, and what cargo was then on
board.

In case a boat or vessel be lost, it is
the duty of the captain and hands, to use
all possible means to recover the whole
or as much as possible, of the cargo, for
which labor and expence, the insurers
will pay their proportionable part.

No boat which is insured, must attempt
to pass the Falls of the Ohio, without
taking a pilot on board.

Any shipper, who intends to tarry at
any port or place on the voyage, for the
benefit of trading, or other purposes, must
have an article to that effect, inserted in
the policy of insurance.

Published by order of the Directors,
WILLIAM MACBEAN, CLK.
March 4th, 1802.

A LARGE, ELEGANT, AND WELL CHOSEN ASSORTMENT OF GOODS.

Just received, now opening
And For Sale at the STORE of
JOHN A. SEITZ.
Lexington, Feb. 3d, 1802

AS my Son, Tandy Ruberford, has
without any just cause eloped from out of
my care, or jurisdiction, I hereby forwarn
any person or persons, whatever, from
dealing with him, or harbouring him by
any means, as I shall not spare putting
the law in force against any body that
will be liable for the above breach, &c.
Archibald Ruberford.

March 23, 1802.

NOTICE

HAVING removed my family to a farm in
the neighborhood of Lexington, and intending
to do my business in town, I think it necessary
to inform my clients that except during the sessions
of the Court of Appeals, General Court, and Circuit
Court of the United States for Kentucky and the
Territories North-West of the Ohio, I shall attend
at my office in Lexington, every day, from nine
o'clock in the morning, until one in the afternoon,
at which time and place, all who have business with
me must attend.

J. HUGHES.

Lexington, September 11th, 1801.

CLARKE COUNTY.

March Court of Quarter Sessions 1802.

Robert Clark jun. Compt.

v. s.

James M' Millin, Robert M' Millin,
Theodorus Spaw, Gabriel Johnson,
Gen. Washington Johnson, John
Harrison & Mary his wife, Davis
Floyd & Susanna his wife whether
as heirs or admrs. of the said Benj.
Johnson & Berrey Johnson (wid-
ow) & James C. Johnson, son
of Benj. Johnson, who was
another heir of the sd. Benj. John-
son & Lancelotte Jenkins & An-
thony Jenkins, James Duncan &
Wm. Rogers.

IN CHANCERY.

The defendant Theodorus Spaw, not
having entered his appearance herein a-
greeable to law and the rules of this
court; and it appearing by satisfactory
proof, that he is not an inhabitant of this
state—on the motion of the complainant
by his counsel, it is ordered, that the said
defendant do appear here on the first day
of the next June term, and answer the
complainant's bill; or otherwise the same
will be taken for confessed; and that a
copy of this order be forthwith inserted
in the Kentucky Gazette for two months
successively; another copy posted at the
door of the court house, in the town of
Winchester; and another copy published
at the door of the Stone meeting house
on Howard's creek, from Sunday imme-
diately after Divine service.

(A Copy) Telle,
David S. Collins, D.C.C. & G.

NOTICE.

AS I have invented a Machine for
the CUTTING of NAILS, which
will on a moderate calculation, cut one
thousand pounds of Iron into Nails of a
ny size, in twelve hours; and have shewn
a model thereof, to a number of my
friends and acquaintances; also, have
taken the proper steps to obtain a patent
for the same, I do hereby forwarn all
persons from making use of said inven-
tion, under the penalty of what the law
directs in such cases.

EDWD. WEST.

Lexington, 24th March, 1802.

NOTICE.

I SHALL attend with commissioners
appointed by the county court of
Bourbon, on the 29th day of May next,
to meet at the house of William Alkire
and to proceed from thence to a Buckeye,
marked B. D. on the north side of Hunt-
ing creek, now called Green creek and
there to take the depositions of witnesses,
to establish the calls and boundaries of an
entry of 500 acres, made in the name of
John Dark, and to do such other acts as
I may think proper and agreeable to law.

JOHN DARK.

20th April, 1802.

PRIVATE ENTERTAINMENT.

WILLIAM EDWARDS

RESPECTFULLY informs his friends
and the public in general, that he has ta-
ken that elegant Brick House, opposite
Bradford's Printing office; where he in-
tends keeping

PRIVATE ENTERTAINMENT

FOR MEN AND HORSE.
From the commodious construction of
the house, and the attention that will be
paid to those who may please to call on
him, he flatters himself that he will merit
and receive a portion of the public favors.

SELECT PARTIES

May at any time be accommodated with
private rooms.

Lexington, April 30th, 1802.

FOR SALE, For CASH

285 ACRES OF FIRST RATE LAND,
LYING on the Rolling Fork of Sta-
te River, opposite Gooden's Station,
and near to the road leading from Baird-
town to Hardin Court house, about half
way between the two places; good title,
it being a choice piece out of Honeyman's
2,000 acre tract.

ALSO 1500 ACRES, the one moiety of
3,000 acres of military land, located for
F. Woodson, in 1780, on the Ohio; it
is land of the best quality, but has been
taken within the Indian boundary and
will, therefore, be sold at a price so
low, as to authorize a monied man to pur-
chase on speculation. For terms enquire
of Mr. John Caldwell, of Baird-town;
Mr. Geo. Clarke, of Fayette, or of

CUTH. BANKS.

Lexington, April 28th, 1802. 60uf

TAKEN up by the subscriber, Clarke

county, near Boonborough,

ONE SORREL MARE,

A star in her forehead, supposed to be
seven years old, about fourteen hands
high, branded supposed to be S on the
near shoulder and jaw, valued to \$13 10.

ALSO

One small SORREL HORSE,

About three years old, with a small bell
on, a small star in his forehead, about four-
teen hands high, no brand perceivable,
valued to \$10.

JOHN DYCHE.

Feb. 23, 1802.

M I L L S

FOR SALE.

THE subscriber has for sale
166 ACRES OF LAND,
lying on Lower Howard's creek, in Clarke
county, the former property of James Bryant.

There is on it an elegant

TWO STORY DWELLING HOUSE,

A GOOD COUNTRY GRIST MILL,

A GOOD NEW FILLING MILL,

in good repair, well established;

A GOOD STILL HOUSE.

The buildings all well built of Stone,
with other improvements.

A MEADOW, ORCHARD,

and other LAND in cultivation;

with never failing SPRINGS of the best of
water.

The whole will be sold together or a part;
with a MILL SEAT.

The best that is known in this country,
for a Merchant Mill; the convenience and
quality of STONE for building is scarce to
be found—it is within two miles of Boon-
borough, six of Winchester, fifteen of Lexing-
ton. A general warranty deed will be given.
Terms will be made known by the subscriber
living on the premises.

WILLIAM TAYLOR.

April 14th, 1802.

WINCHESTER'S DIALOGUES,

For sale at this office.